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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,269	10/12/2001	Oscar Salonaho	59643.00071	2266

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TYSONS CORNER, VA 22182

EXAMINER
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MEHRPOUR, NAGHMEH

ART UNIT	PAPER NUMBER
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2617

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08/16/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 09/977,269	Applicant(s) SALONAH O ET AL.	
	Examiner Naghmeh Mehrpour	Art Unit 2617	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 6, 7, 9-15, 17-19, 38, 40 and 47-53 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6-7, 9-15, 17-19, 38, 40 47-53 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

1. **Claims 1, 6-7, 9-13, 15, 17-19, 38, 40, 47-53,** are rejected under 35 U.S.C. 102(e) as being anticipated by Endo III et al. (Patent Number 5,943,610).

Regarding claims 1, 53, Endo teaches a method/mobile of controlling the power with which a mobile station transmits to a base station, comprising the step of:

transmitting from the base station to the mobile station a power control command having a given value (col 2 lines 23-55);

receiving said power control command at said mobile station (col 2 lines 23-55);  
determining from said received power control command a parameter  
representative of the quality with which the power control command is received at the  
mobile station (col 2 lines 55-67, col 3 lines 1-7), and

**combining the received values of said received power control commands  
(col 3 lines 7-62),**

**comparing the combined value and the selected value and on the basis of  
the comparison selecting one of said combined value and the selected value and  
controlling the power which the mobile station transmits in accordance  
therewith (col 3 lines 10-67); and**

controlling the power at which the first station transmits signals based on **the  
combined value from combining determined received values and the selected  
determined given from comparing the determined received value** (col 3 lines 7-62).

Regarding claim 6, Endo teaches a method wherein the transmitted **each** power control  
command comprises one of a mobile value indicating that the power should be  
increased and a base value indicating the power should be decreased (col 3 lines 7-62).

Regarding claim 7, Endo teaches a method wherein the predetermined criteria is to  
select value if at least one of the determined transmitted values is the base value, **and  
to select the first value if all of the determined given values are the first value** (col 3  
lines 7-63).

Regarding claim 9, Endo teaches a method wherein the first threshold value is between **the first and second values** (col 3 lines 7-62).

Regarding claim 10, Endo teaches a method wherein the threshold value is such that one of **the first and second** value than to the other (col 3 lines 7-62).

Regarding claim 11, Endo teaches a method wherein the **first threshold** value is **closer to the second value than to the first value** (col 2 lines 23-67).

Regarding claim 12, Endo inherently teaches a method wherein the mobile value is +1 and the base value is -1 (col 2 lines 23-67).

Regarding claim 13, Endo inherently teaches a method wherein the threshold value is in the range -.6 to 0 (col 2 lines 23-67).

Regarding claim 15, Endo teaches a method as claimed in any preceding claim, further comprising the steps of :

receiving at the base station a signal from said mobile station, determining the strength of the received signal from the first station and determining from the strength of the received signal the power control command transmitted to the first station **to be transmitted to the first station**(col 2 lines 23-67).

Regarding claim 17, Endo teaches a method as claimed in claim 16 when appended to claim 6, wherein the one of the combined value and the selected value which is closer to representing a predetermined one of said mobile and base transmitted values is selected (col 3 lines 7-62).

Regarding claim 18, Endo teaches a method as claimed in claim 17, wherein said predetermined one of said values is the base value (col 3 lines 7-62).

Regarding claim 19, Endo teaches a method as claimed in any one of the preceding claims when appended to claim 1, comprising the steps of:

**Summing a selected one of the determined received values of the power control commands currently received from the second stations and a selected one of the determined received values of the power control commands from the second stations (col 3 lines 7-62);**

**comparing the summed value with a third threshold value (col 2 lines 23-67);**  
**and**  
**outputting a default value if the summed value exceeds the third threshold value, and otherwise outputting the selected one of the determined received values of the power control commands current received from the second stations (col 2 lines 23-67).**

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Regarding claim 38, Endo teaches a mobile station which in use transmits signals to a plurality of base stations, said mobile station comprising:

means for receiving power control commands transmitted from said base stations to said mobile station, said power control commands being transmitted with a given values (col 3 lines 7-62);

means for determining the received values of said received power control commands (col 3 lines 7-62);

means for combining the received values of said received power control commands (col 3 lines 7-62); and

means for controlling the power with which mobile station transmits to the base station based on said combined value (col 3 lines 7-62).

Regarding claim 40, Endo teaches a mobile station which is use transmits signals to one or more base stations, the mobile station comprising:

means for receiving power control commands fro the one or more base stations (col 2 lines 23-67).

Regarding claims 47-48, Endo teaches a device wherein the given value of each power control command comprises either a first value indicating that the power should be increased or a second value indicating that the power should be decreased, and

Wherein if the selected determined given value is the second value, the controlling means decreases the power with the first station transmits regardless of the combined value (col 3 lines 7-62); and

If the selected determined given value is the first value and the combined value exceeds a second threshold value, the controlling means increase the power with which the first station transmits (col 3 lines 7-62); and

If the selected determined given value of the first value and the combined value is below the second threshold value, the controlling means decrease the power with which the first station transmits (col 3 lines 7-62).

Regarding claims 49, 52, Endo teaches a method wherein the second stations are base stations (col 2 lines 23-67).

Regarding claims 50-51, Endo teaches a method wherein the first station is a mobile (col 2 lines 23-67).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.



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2. **Claim 14**, is rejected under 35 U.S.C. 103(a) as being unpatentable over Endo et al. (US patent 6,808,041).

Regarding claim 14, Endo fails to teach a method as claimed in claim 13, wherein the threshold value is in the range -0.025 and -0.30. However, Examiner takes official notice that a method of claim 13 wherein the threshold value is in the range -0.025 and -0.30 is a design choice. Therefore, it would have been obvious to ordinary skill in the art at the time the invention was made to combine the above teaching with Endo, in order to enable to control the performance of the system more precisely.

### ***Response to Arguments***

3. Applicant's arguments filed 7/20/07 have been fully considered but they are not persuasive.

In response to the applicant's argument that *Endo fails to teach the claims limitations*.

The Examiner asserts that Endo teaches in FIG. 1 is a system arrangement diagram for schematically showing a mobile terminal (portable radio terminal), a radio base station, and a radio base station control apparatus, employed in a transmission power control system and method for a mobile terminal according to the present invention. That is, the mobile terminal 100 owns a function to transmit and/or receive radio signals having frequencies  $f_1$  and  $f_1'$  with respect to the radio base station 101 in a radio zone L1. Also, the mobile terminal 100 owns another function to

measure a reception field strength as to the reception frequency of  $f_1$ , and a further function to store this measurement value. The radio base stations 101 and 102 are connected to the radio base station control apparatus 103, and each radio base station owns such a function that data transmission/reception between the radio base station control apparatus 103 and mobile terminals within the constructed radio zone L1 or L2 respectively are repeated by using the allocated radio frequencies. The radio base station 101 has a function to measure a reception field strength as to the reception frequency  $f_1'$  in order to monitor a quality of a radio signal, and to notify the measurement value to the radio base station control apparatus 103. The radio base station control apparatus 103 transmits and receives data between the radio base stations 101, 102 connected to this control apparatus 103, and a mobile terminal which is connected to these radio base stations in the wireless manner. This radio base station control apparatus 103 owns a function to monitor the reception field strength of the mobile terminal 100 under communication, and another function to send an instruction to the mobile terminal 100 to increase/decrease the transmission power thereof in response to the measured reception field strength. The control unit 209 stores the proper number of reception field strength values having been measured in each time of measurement, and has a function to calculate an average value of these reception field strength values being stored, and further stores a threshold value for reception field strength variation in order to check a changing degree of a reception field strength. Also, the transmission power control unit 208 is capable of controlling the transmission power under such a condition that a range of 30 dBm is

controllable by 0.5 dBm per one step. In the mobile terminal, the reception field strength of the frequency f1 sent from the radio base station 101 is measured by the reception field strength measuring unit 207, and the measurement result is notified to the control unit 209. The control unit 209 calculates an average value of reception field strength based upon the notified reception field strength and the proper number of predetermined reception field strengths. Then, the control unit 209 compares this average reception field strength with the first area block discriminating threshold value and the second area block discriminating threshold value in order to judge where the own terminal is located in any one of the area blocks. Then, the increasing width and the decreasing width of the transmission power are determined based on the discrimination result (step 501). For instance, in the case where the mobile terminal is present in the block 401, the unit of the above-described increasing width and decreasing width is set to 3 steps and 1 step, respectively. In the case of block 402, the unit of the above-described increasing width and decreasing width is set to 1 step and 3 steps respectively. In the case of block 403, the unit of the increasing width and decreasing width is set to 1 step and 1 step respectively. Next, the measured reception field strength is compared with the previous reception field strength which has been measured and stored (step 502). In such a case that the difference value (comparison result) is larger than the threshold value of reception field strength difference, when the reception field strength is increased, 1 step is added to the

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increasing width of the transmission power, whereas when the reception field strength is decreased, 1 step is added to the decreasing width of the transmission power (step 503). The control unit 209 determines the increasing width and the decreasing width of the transmission power, and thereafter acquires the power control bit set in the burst signal received from the radio base station 101. Then, the control unit 209 checks the value set in this power control bit (step 504). When "1" is set in the power control bit, the control unit 209 instructs the transmission power control unit 208 to increase the transmission power and notifies the increasing width of the transmission power (step 505). When "0" is set in the power control bit, the control unit 209 instructs the transmission power control unit 208 to decrease the transmission power and notifies the decreasing width of the transmission power (step 506). Then, the transmission power control unit 208 increases or decreases the transmission power in accordance with the instruction about the transmission power, and also the increasing width, or decreasing width of the transmission power, which are received from the control unit 209. It should be understood that the step numbers used to control the transmission powers at the steps 501 and 502 may be properly selected in the present invention. Also, properly selected number of average reception field strength may be employed instead of the previous reception field strength used at the steps 502 and 503. Also, the decreasing width of the transmission power need not be added which is determined by the changing degree of the reception field strength at the step 503. Subsequently, a transmission power control method for mobile terminals according to a second embodiment of the present invention will now

be explained with reference to FIG. 6. FIG. 6 is a flow chart for describing operations of the transmission power control for a mobile terminal according to the second embodiment of the present invention. In the mobile terminal, the control unit 209 owns a function to store the properly selected number of setting values of the power control bit preset to each of the burst signals in addition to the above-explained function of the first embodiment. Similar to the operations described in the flow chart of FIG. 5, the control unit 209 determines the increasing width and the decreasing width of the transmission power (steps 600 to 603), and thereafter acquires the power control bit contained in the received burst signal to check the value set in this power control bit (step 604). When "1" is set to this power control bit, the properly selected number of power control bits which have been previously stored are checked. When "1" is continuously received by a predetermined number of times, e.g., 10 times (step 605), 2 steps are added to the increased width of the transmission power (step 606). The control unit 209 determines the increasing width of the transmission power, and thereafter instructs the transmission power control unit 208 to increase the transmission power and also notifies the increasing width of the transmission power (step 607). When "0" is set at the step 604, the properly selected number of power control bits previously stored are checked. If "0" is continuously received 10 times (step 608), then 2 steps are added to the decreasing width of the transmission power (step 609). The control unit 209 determines the decreasing width of the transmission power, and thereafter instructs the transmission power control unit 208 to decrease the transmission power and notifies the

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decreasing width of the transmission power. In response to the instruction about the transmission power and also the increasing width, or the decreasing width of the transmission power received from the control unit 209, the transmission power control unit 208 increases, or decreases the transmission power.

In addition the Examiner asserts that the references made herein are done so for the convenience of the applicant. They are in no way meant to limit the reference. The reference **MUST** be considered in its entirety.

### **Conclusion**

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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**5. Any responses to this action should be mailed to:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

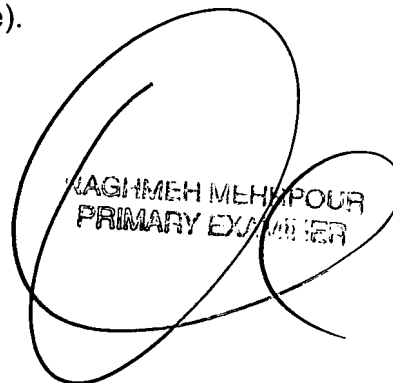
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold be reached (571) 272-7905.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

August 13, 2007



NAGHMEH MEHRPOUR  
PRIMARY EXAMINER